

## REMARKS

Entry of the foregoing and reexamination and reconsideration of the subject application, as amended, pursuant to and consistent with 37 C.F.R. § 1.112, are respectfully requested in light of the remarks which follow.

Claims 54-98 are pending. Claims 68-71 are amended herein to recite "is" rather than comprising, and to properly depend on claim 55. Thus, no new matter is submitted by way of the amendments to the claims made herein. Applicants reserve the right to file at least one continuation or divisional application directed to any subject matter canceled by way of the present Amendment. The sequence listing is also amended herein, and is discussed in greater detail below.

### ***Sequence Listing***

With regard to the Sequence Listing, the Examiner notes that the description of SEQ ID NOs: 92, 97, 98 and 99 indicates a lactam bond is formed between position 5 (e.g., Xaa is Gln, Lys, Orn, Ala or Nle for SEQ ID NO:99) and position 9 (e.g., Xaa is Arg or Lys for SEQ ID NO:99). Although Lys, Orn or Arg is at 5 or 9 position, the Examiner notes that there is no Glu or Asp residue at either position, thus it is not feasible to form such a bond. The Examiner further notes that the description of SEQ ID NOs:47, 48, 49, 50, 51 and 102 is not consistent with the listed sequence.

In this regard, Applicants submit herewith a corrected sequence listing. Applicants submit that this sequence listing does not present any inappropriate new matter, as sets forth the sequences and descriptions submitted on behalf of the sequence identifiers in the sequence listing as-filed with the application on January

5, 2001, which was filed with the corresponding PCT application, International Application No. PCT/SE99/01230. Applicants submit that changes to the original PCT sequence listing which resulted in the present objections were inadvertent. Thus, Applicants submit that no new matter is presented by way of the attached sequence listing.

The following specific changes have been made to the descriptions in the attached sequence listing in order to bring it into correlation with the as-filed sequence listing.

In SEQ ID NO:7, it is specified that the binding between amino acids 5 and 9 is a lactam;

In SEQ ID NO:45, it is specified that the sequence corresponds to the sequence consisting of amino acids 21-31, rather than 20-31;

In SEQ ID NO:47, it is specified that acetylation and amidation are included;

In SEQ ID NO:48, it is specified that the sequence corresponds to the sequence consisting of amino acids 19-31, rather than 20-31;

In SEQ ID NO:49, it is specified that the sequence corresponds to the sequence consisting of amino acids 19-31, rather than 20-31, and that acetylation and amidation are included;

In SEQ ID NO:50, it is specified that the sequence corresponds to the sequence consisting of amino acids 18-31, rather than 20-31;

In SEQ ID NO:51, it is specified that the sequence corresponds to the sequence consisting of amino acids 18-31, rather than 20-31; and that acetylation and amidation are included;

In SEQ ID NO:92, it is specified that the sequence corresponds to the

sequence consisting of amino acids 20-31, rather than 18-31, that acetylation and amidation are included, and lactam is deleted. Applicants further note that the specification on page 10, line 13-20, states that SEQ ID NOs:68-99 (including SEQ ID NO:92) consist of a modification of the sequence consisting of the amino acids in positions 20-31 of human lactofenin. Furthermore, it is clear from the sequence itself that amino acids 20-31 are contemplated.

In SEQ ID NO:97, it is specified that the sequence corresponds to the sequence consisting of amino acids 20-31, rather than 18-31, and lactam is deleted;

In SEQ ID NO:98, it is specified that acetylation and amidation are included, and lactam is deleted; and

In SEQ ID NO:99, it is specified that the sequence corresponds to the sequence consisting of amino acids 20-31, rather than 18-31, and lactam is deleted. Entry of the attached Sequence Listing is respectfully requested.

In addition, Applicants have clarified the description of SEQ ID NO:102 (this sequence was added during prosecution) to note that SEQ IS NO:102 is not a modification of the sequence consisting of amino acids 18-31 in human lactoferin of SEQ ID NO:99.

***Rejection Under 35 U.S.C. § 112, First Paragraph***

Claims 54-98 stand rejected under 35 U.S.C. § 112, first paragraph, as purportedly containing subject matter which was not described in the specification in such a way as to reasonably convey that the inventors, at the time the application was filed, had possession of the claimed invention. Applicants respectfully traverse.

The Office Action states that claims 54-98 are directed to a peptide

comprising SEQ ID NO:99, wherein  $X_1$ ,  $X_2$ ,  $X_3$ ,  $X_4$ ,  $X_5$  and  $X_6$  are defined, and wherein SEQ ID NO:38 is excluded, as a medicinal product or a food stuff comprising the peptide and a method of treating infections or inflammations comprising administering the peptide. The Office Action further states that the specification indicates that new peptides are formed from the sequences consisting of all or some of the amino acids 12-40 of human lactoferrin counted from the N-terminal end, and the peptide may be modified so that the residue Lys in position 5 in SEQ ID NO: 6 and Asp in position 9 are linked by the formation of a lactam between the side chains of the residues, thus forming a loop. The Office Action also asserts that SEQ ID NO: 99 has a lactam bond formed between position 5 (Xaa is Gin, Lys, Om, Ala or Nle) and position 9 (Xaa is Arg or Lys) in the sequence listing.

As noted above, the description of SEQ ID NO:99 has been amended herein to remove the reference to the lactam bond, as well as to recite amino acids 20-31. Applicants further note that the sequence listing as originally filed with the present application did not recite a lactam bond.

In light of these amendments to the sequence listing, Applicants submit that the specification no longer recites a sequence having a lactam bond. Thus, this rejection is obviated, and Applicants request that the rejection under 35 U.S.C. § 112, first paragraph, be withdrawn.

***Rejection Under 35 U.S.C. § 112, Second Paragraph***

Claims 54-98 are rejected under 35 U.S.C. § 112, second paragraph, as purportedly indefinite. Claims 54-98 stand rejected as claim 54 purportedly recites SEQ ID NO:99 with only  $X_1$ ,  $X_2$ ,  $X_3$ ,  $X_4$ ,  $X_5$  and  $X_6$  defined, but does not indicate the

lactam bond formed between positions 5 and 9 as indicated in the description of SEQ ID NO:99 of the sequence listing. As discussed above, the sequence listing has been amended herein with regard to SEQ ID NO:99, such that the description no longer recites a lactam bond. Thus, this rejection is obviated.

Claims 68-71 stand rejected because these claims purportedly fail to further limit the length of the peptide as recited in claim 55. For example, the Office Action states that claim 55 recites that the peptide is SEQ ID NO: 70, 72-74, 80-83, 87-91, 93-95 or 97, while claim 68 recites a peptide "comprising" SEQ ID NO: 70 or 74. Claims 68-71 are amended herein to replace "comprising" with "is" to clarify the claimed subject matter.

In light of the above remarks and amendments to the claims and sequence listing, Applicants request that the rejections under 35 U.S.C. §112, second paragraph, be withdrawn.

### CONCLUSION

From the foregoing, further and favorable action in the form of a Notice of Allowance is respectfully requested and such action is earnestly solicited.

In the event that there are any questions concerning this amendment or the application in general, the Examiner is respectfully requested to telephone the undersigned so that prosecution of the application may be expedited.

Respectfully submitted,

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By: \_\_\_\_\_



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